Release notes for ENDF/B Development e-089_Ac_000 evaluation

October 13, 2016

- `fudge-4.0` Warnings:

  1. Mislabled emitted particle
     Reading ENDF file: ../e-089_Ac_000.endf (Error # 0): ZAP messed up

     `WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0`

  2. FIXME: Generic fudge unimplemented message
     reaction label 1: e- + Ac + gamma [bremsstrahlung] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

  3. FIXME: Generic fudge unimplemented message
     reaction label 2: e- + Ac [excitation] / Product: e- (Error # 0): Generic unimp (c)

     `WARNING: Checking not yet implemented for energyLoss type data`

- `fudge-4.0` Errors:

  1. Calculated and tabulated thresholds don't agree
     reaction label 0: e- + Ac [large angle Coulomb scattering] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  2. Calculated and tabulated thresholds don't agree
     reaction label 1: e- + Ac + gamma [bremsstrahlung] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  3. Calculated and tabulated thresholds don't agree
     reaction label 2: e- + Ac [excitation] / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 10. eV!`

  4. Calculated and tabulated thresholds don't agree
     reaction label 3: e- + e- + Ac1s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 107190. eV!`

  5. Calculated and tabulated thresholds don't agree
     reaction label 4: e- + e- + Ac2s1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 19848. eV!`

  6. Calculated and tabulated thresholds don't agree
     reaction label 5: e- + e- + Ac2p1/2 / Cross section: (Error # 0): Threshold mismatch

     `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 19163. eV!`

  7. Calculated and tabulated thresholds don't agree
     reaction label 6: e- + e- + Ac2p3/2 / Cross section: (Error # 0): Threshold mismatch

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```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 15883. eV!
```

8. Calculated and tabulated thresholds don't agree
   reaction label 7: e- + e- + Ac3s1/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4974.3 eV!
```

9. Calculated and tabulated thresholds don't agree
   reaction label 8: e- + e- + Ac3p1/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4654.7 eV!
```

10. Calculated and tabulated thresholds don't agree
    reaction label 9: e- + e- + Ac3p3/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3903.9 eV!
```

11. Calculated and tabulated thresholds don't agree
    reaction label 10: e- + e- + Ac3d3/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3379.6 eV!
```

12. Calculated and tabulated thresholds don't agree
    reaction label 11: e- + e- + Ac3d5/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 3224.1 eV!
```

13. Calculated and tabulated thresholds don't agree
    reaction label 12: e- + e- + Ac4s1/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1249.5 eV!
```

14. Calculated and tabulated thresholds don't agree
    reaction label 13: e- + e- + Ac4p1/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 1104.8 eV!
```

15. Calculated and tabulated thresholds don't agree
    reaction label 14: e- + e- + Ac4p3/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 911.4400000000001 eV!
```

16. Calculated and tabulated thresholds don't agree
    reaction label 15: e- + e- + Ac4d3/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 675.51 eV!
```

17. Calculated and tabulated thresholds don't agree
    reaction label 16: e- + e- + Ac4d5/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 639.62 eV!
```

18. Calculated and tabulated thresholds don't agree
    reaction label 17: e- + e- + Ac4f5/2 / Cross section: (Error # 0): Threshold mismatch

```
        WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 328.9 eV!
```

19. Calculated and tabulated thresholds don't agree
    reaction label 18: e- + e- + Ac4f7/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 319.74 eV!`

20. Calculated and tabulated thresholds don't agree
    reaction label 19: e- + e- + Ac5s1/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 274.1 eV!`

21. Calculated and tabulated thresholds don't agree
    reaction label 20: e- + e- + Ac5p1/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 218.79 eV!`

22. Calculated and tabulated thresholds don't agree
    reaction label 21: e- + e- + Ac5p3/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 174.66 eV!`

23. Calculated and tabulated thresholds don't agree
    reaction label 22: e- + e- + Ac5d3/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 92.81999999999999 eV!`

24. Calculated and tabulated thresholds don't agree
    reaction label 23: e- + e- + Ac5d5/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 86.38 eV!`

25. Calculated and tabulated thresholds don't agree
    reaction label 24: e- + e- + Ac6s1/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 45.17 eV!`

26. Calculated and tabulated thresholds don't agree
    reaction label 25: e- + e- + Ac6p1/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 29.31 eV!`

27. Calculated and tabulated thresholds don't agree
    reaction label 26: e- + e- + Ac6p3/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 21.95 eV!`

28. Calculated and tabulated thresholds don't agree
    reaction label 27: e- + e- + Ac6d3/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4.49 eV!`

29. Calculated and tabulated thresholds don't agree
    reaction label 28: e- + e- + Ac6d5/2 / Cross section: (Error # 0): Threshold mismatch

    `WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 4. eV!`

30. Calculated and tabulated thresholds don't agree
reaction label 29: e- + e- + Ac7s1/2 / Cross section: (Error # 0): Threshold mismatch

```
WARNING: Calculated and tabulated thresholds disagree: 1.e-5 eV vs 5.41 eV!
```

- `xsectplotter` Warnings:

    1. Mislabled emitted particle
    Error: ZAP messed up

    ```
    stderr while processing crossSection

            WARNING: photon most likely labelled as an electron (ZAP = 11), converting to ZAP = 0
    ... [4 more lines]
    ```